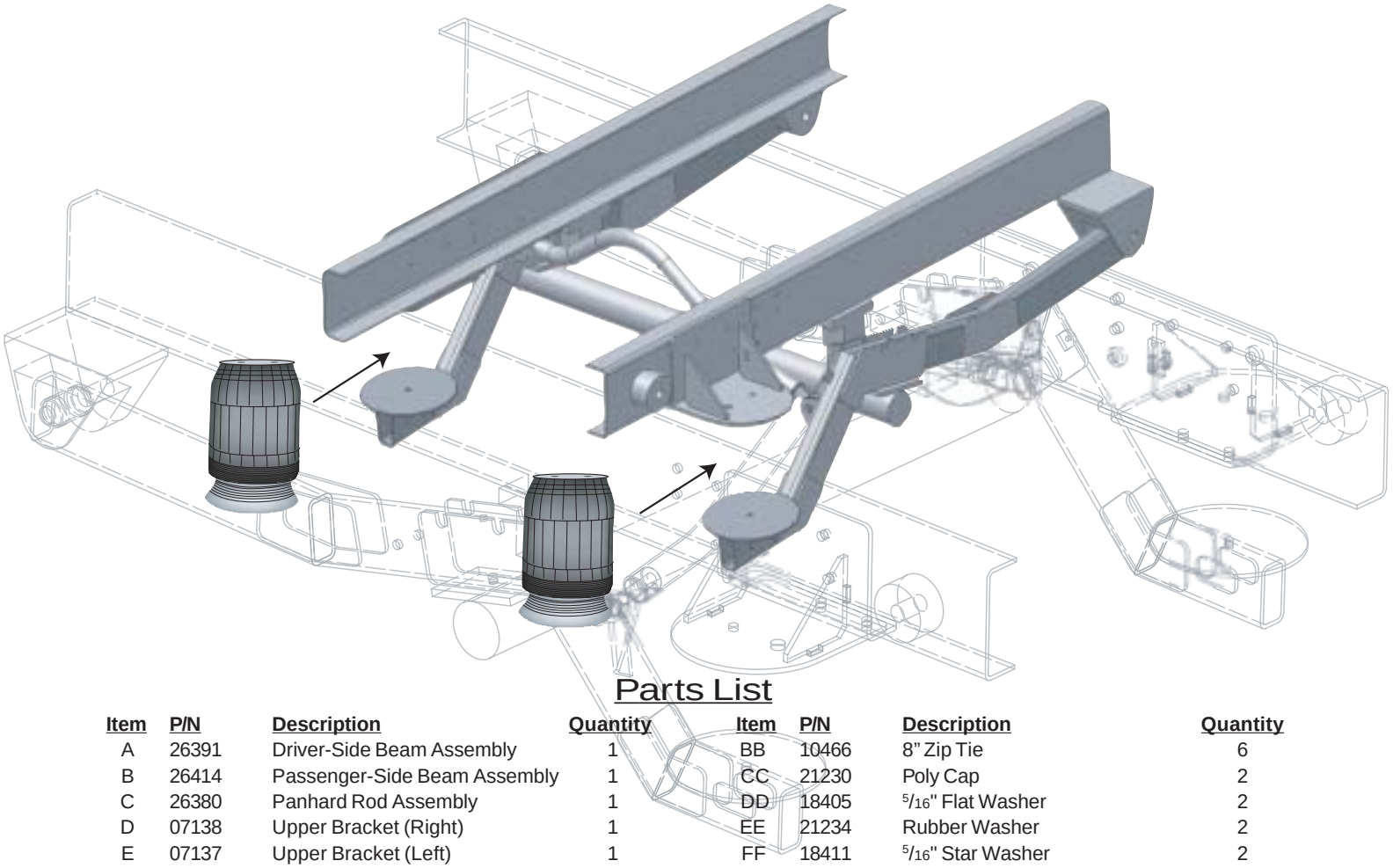
ROADTAMER™
ULTIMATE SUSPENSION UPGRADE
by AIR LIFT®

MN-643
(02511)
ECR 5461

Kit No. 39205

Please read these instructions completely before proceeding with installation



Parts List

Item	P/N	Description	Quantity	Item	P/N	Description	Quantity
A	26391	Driver-Side Beam Assembly	1	BB	10466	8” Zip Tie	6
B	26414	Passenger-Side Beam Assembly	1	CC	21230	Poly Cap	2
C	26380	Panhard Rod Assembly	1	DD	18405	5/16" Flat Washer	2
D	07138	Upper Bracket (Right)	1	EE	21234	Rubber Washer	2
E	07137	Upper Bracket (Left)	1	FF	18411	5/16" Star Washer	2
F	58201	Bellows	2	GG	21233	5/16" Hex Nut	4
G	17247	1/2” - 13 x 1.75” Bolt GD8	14	HH	17269	3/4” - 16 x 4” Bolt GD8	1
H	18485	1/2” Flat Washer	28	II	18518	3/4” Flat Washer GD8	2
I	18460	1/2” - 13 Nylock Nut	16	JJ	18470	3/4” - 16 Nylock Nut GD8	1
J	17268	10mm Bolt GD8.8	8	KK	18435	3/8"-16 Nylock Nut	2
K	18495	10mm Nylock Nut	4	LL	10195	Flat Washer, 2.5" OD x .53 ID x .19	4
L	13228	Spacer	2	MM	17271	1/2"-13 X 3, Hex Cap Screw	2
M	10308	U-Bolt	2	NN	17307	5/8” - 18 x 6.5 Bolt	4
N	18509	Washer .65ID x 1.25OD	4	OO	18509	1.25” OD Flat Washer	8
O	18508	5/8” - 18 Nut	4	PP	18536	5/8” Nyloc Nut	4
P	18451	3/4” - 16 Jam Nut	2	QQ	17305	22mm Bolt	1
Q	18484	1/2” - 20 Hex Nut GD8	4	RR	18535	22mm Flat Washer	2
R	18429	1/2” - Lock Washer	6	SS	18534	22mm Nyloc Nut	1
S	21745	1/4” MNPT x 1/4” Tube Straight	2	TT	10513	Axle Bracket	1
T	18480	9/16” Nylock Nut	1	UU	17286	Centering Pin	1
Y	17219	9/16” - 12 x 5 Bolt GD8	1	VV	10642	Spring Retainer	1
Z	13034	Spacer	2	WW	10445	Limiting Strap	1
AA	20086sub	Air Line Assembly	1				

Read all maintenance guidelines on page 7 before operating the vehicle.

DANGER: Compressed air can cause injury and damage to the vehicle and parts if it is not handled properly. For your safety, do not try to inflate the air springs until they have been properly secured to the vehicle.

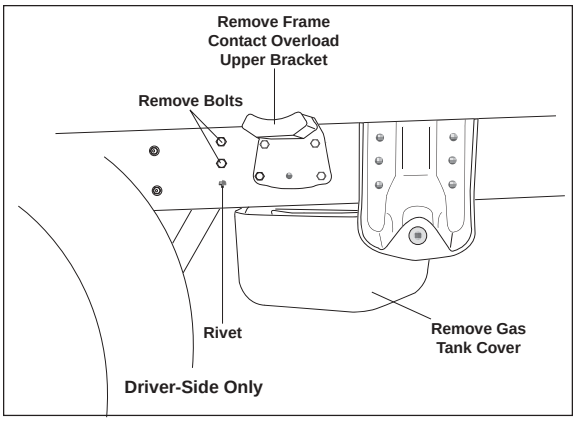


Figure 1

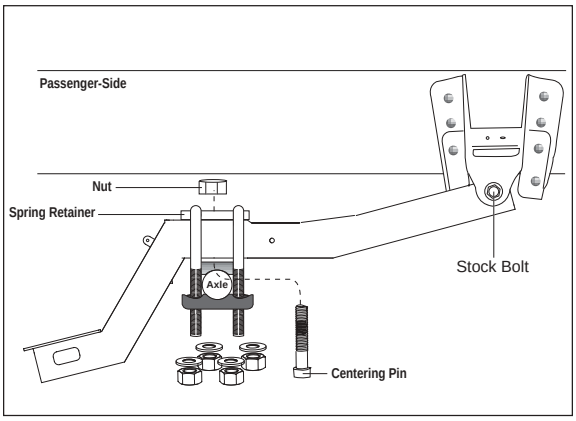


Figure 2a

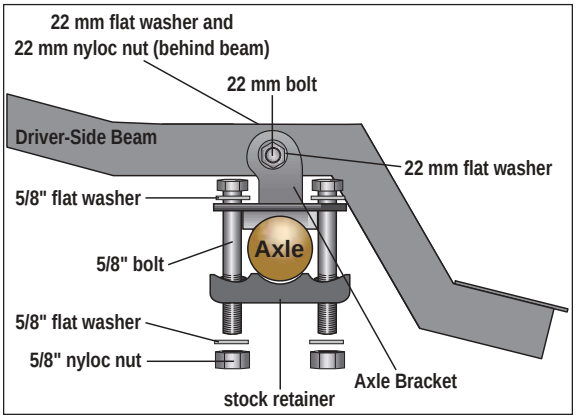


Figure 2b

I. Getting Started

1. Elevate the rear of the vehicle and secure the frame with jack stands.

2. Remove both of the leaf springs.

   NOTE: Retain the front nuts and bolts to be reused.

3. Remove the rear contact overload frame brackets from both sides of the frame rail.

4. Remove the bottom gas tank cover from the vehicle.

5. Remove the two bolts above the rivet on the driver-side of the frame rail (Figure 1).

II. Attaching the Axle Beams

1. Attach the spring retainer (VV) to the passenger side beam using the centering pin (UU). Tighten securely (Figure 2a).

2. Install the passenger-side beam assembly (A) to the front spring eye hanger using the supplied 16mm bolt (KK), flat washers (LL), and nyloc nut (MM). Leave loose at this time.

3. Attach the passenger side beam assembly to the axle with U-bolts (M), flat washers (N), and nuts (O) (Figure 2a). Torque to 128 ft/lbs.

4. For the driver-side, set the axle bracket (TT) onto the top of the axle. Insert the bolts (NN) through the flat washers (OO), the axle bracket, and the stock spring retainer. Fasten using flat washers (OO) and nyloc nuts (PP) (Figure 2b).

5. Tighten and evenly torque to 128 ft/lbs.

6. Set the beam assembly onto the axle bracket. Insert the bolt (QQ) through one flat washer (RR) and through the front of the beam assembly. Fasten using a flat washer (RR) and a nyloc nut (SS) (Figure 2b). Leave loose at this time.

   NOTE: Index the alignment pin into the spring perch hole before applying torque.

Technical Support
1-800-248-0892
Ext. 2

III. Attaching the Frame Brackets

1. Install the passenger-side frame bracket (D) using the existing holes from the previously removed frame contact overload bracket. Attach using four bolts (G), eight flatwashers (H), and four nylock nuts (I). Tighten securely.

   NOTE: Be sure the bracket flange is tight to the bottom frame flange. Clamp tightly using a pair of vice grips.

2. Attach the driver-side frame bracket (E) following the instructions in the previous step.

3. Install two 10mm bolts (J) above the rivet on the driver-side frame rail (See section I step 5). Tighten securely.

4. It will be necessary to drill two 1/2" holes through the driver-side frame rail to completely attach this bracket.

   NOTE: It may be necessary to raise the chassis up to obtain clearance when drilling.

   Using the mounted bracket as a template, drill a hole through the front-most hole in the bracket. There is already an exisiting slot in the frame that will be enlarged (Figure 3).

5. Attach using one 1/2" bolt (G), two flat washers (H), and one nylock nut (I). Tighten securely.

6. Using the bracket as a template, drill the remaining hole under the frame flange in between the two panhard rod mounts (Figure 3). Attach using one 1/2" bolt (G), two flat washers (H), and one nylock nut (I). Tighten securely.

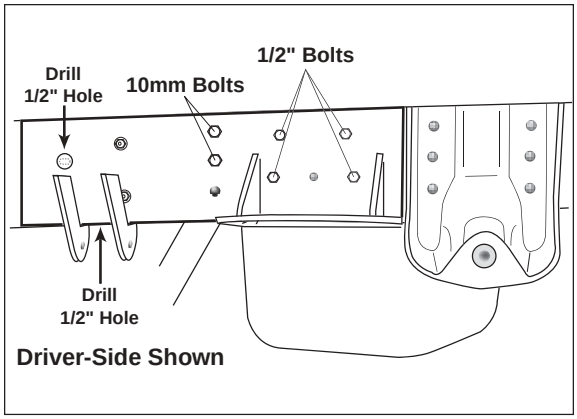


Figure 3

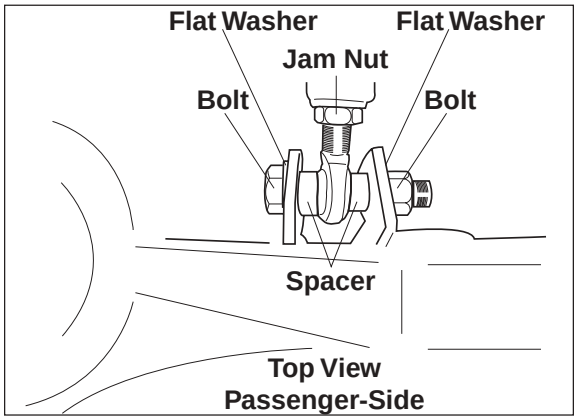


Figure 4

IV. Attaching and Adjusting the Panhard Rod

1. Attach the panhard rod assembly (C) to the driver-side frame bracket using one 9/16" bolt (Y), two flat washers (H), and one nylock nut (T). Leave loose at this time.

2. Lift or drop the rear of the frame so that it measures 31" from the floor to the top of the frame.

3. Measure the distance between the tire and the frame. Pry the frame side-to-side so that the distance is equal on both sides.

4. Adjust the hyme joint and attach it to the passenger-side beam assembly using a 3/4" bolt (HH). Place the bolt through one flat washer (II), through the flange, a 1/2" wide spacer (Z), the hyme joint, another 1/2" wide spacer (Z), the other flange, one flat washer (II) and one nylock nut (JJ). Tighten securely.

5. Turn the hyme joint so as to stay on the "ball" section throughout the travel of the suspension. Tighten the jam nut securely (Figure 4).

6. Tighten the 9/16" panhard bolt and nut that was previously installed on the driver-side bracket in step one.

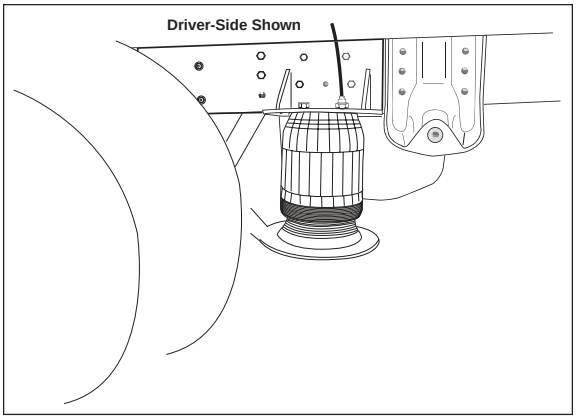


Figure 5

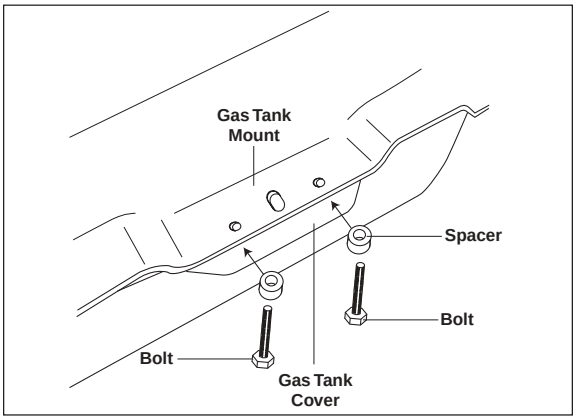


Figure 6

V. Installing the Rolling Lobe Air Sleeves

1. Install the fitting (S) into the large, top stud of the rolling lobe air sleeve. Tighten the fitting finger-tight plus 1 1/2 turns being careful to tighten on the metal hex nut only.

   NOTE: It may be necessary to raise the chassis to provide adequate space to install the air sleeves.

2. Insert the studs of both rolling lobe air sleeves into the bottom mounting hole of the beam assemblies on both sides of the vehicle. Attach finger-tight using a 1/2" lock washer (R) and nut (Q).

3. Lower the frame down while guiding both studs on top of the rolling lobe air sleeves through the holes in the upper mounting bracket.

4. Attach the air sleeves using a 3/4" jam nut (P) on the large stud. Use a lock washer (R) and 1/2" nut (Q) on the smaller stud. Tighten the top mounts securely (Figure 5). Leave the bottom loose at this time.

5. **At this time, lightly oil and torque the axle bracket center bolt to 321 ft. lbs.**

VI. Gas Tank Cover

1. Install the cover back in place by using two 10mm bolts (J) under the frame on each side.

2. Insert the two spacers (L) in the back between the gas tank mount and the gas tank cover. Attach with two 10mm bolts (J). Tighten all bolts securely (Figure 6).

3. Install four 10mm nuts (K) onto the the previously installed bolts on the inside of the frame rail. Tighten securely.

Technical Support
1-800-248-0892
Ext. 2

VII. Installing the Air Lines

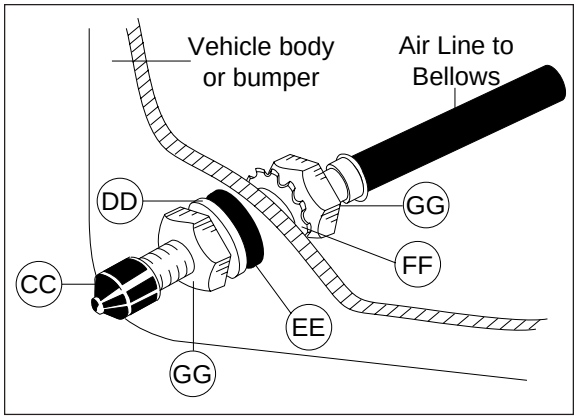


Figure 7

1. Choose a convenient location for mounting the inflation valves. Popular locations for the inflation valve are: the wheel well flanges, the license plate recess in bumper, under the gas cap access door, or through license plate itself.

   NOTE: What ever the chosen location is, make sure there is enough clearance around the inflation valves for an air chuck.

2. Drill a $^{5}/_{16}$" hole to install the inflation valves.

3. Cut the air line assembly (AA) in two equal lengths.

   CAUTION: When cutting or trimming the air line, use a hose cutter (Air Lift P/N 10530), a razor blade or a sharp knife. A clean, square cut will ensure against leaks. Do not use wire cutters or scissors to cut the air line. These tools may flatten or crimp the air line, causing it to leak around the O-ring seal inside the elbow fitting.

4. Place a $^{5}/_{16}$" nut (GG) and a star washer (FF) on the air valve. Leave enough of the inflation valve in front of the nut to extend through the hole and have room for the rubber washer (EE), flat washer (DD), and $^{5}/_{16}$" nut (GG) and cap (CC). There should be enough valve exposed after installation - approximately $^{1}/_{2}$" - to easily apply a pressure gauge or an air chuck (Figure 7).

5. Push the inflation valve through the hole and use the rubber washer (EE), flat washer (DD), and another $^{5}/_{16}$" nut (GG) to secure it in place. Tighten the nuts to secure the assembly in place (Figure 7).

6. Route the air line along the frame to the air fitting on the air spring. Keep at least 6" of clearance between the air line and heat sources, such as the exhaust pipes, muffler, or catalytic converter. Avoid sharp bends and edges. Use the plastic tie straps (BB) to secure the air line to fixed, non-moving points along the chassis. Be sure that the tie straps are tight, but do not pinch the air line. Leave at least 2" of slack to allow for any movement that might pull on the air line.

7. Cut off air line leaving approximately 12" of extra air line. A clean square cut will ensure against leaks. Insert the air line into the air fitting. This is a push to connect fitting. Simply push the air line into the straight fitting until it bottoms out ($^{9}/_{16}$" of air line should be in the fitting).

VIII. Final Adjustments

1. Inflate both rolling lobe air sleeves to 25 p.s.i and check for leaks (refer to section IX).

2. **Tighten both bottom rolling lobe mounts securely at this time.**

3. The vehicle was set up for a rear top of frame height of 31". Do not deviate from this height.

4. With the rear top of the frame at 31", torque both 16mm pivot bolts on the front of the beam to 110 ft/lbs.

5. ***IMPORTANT:*** **Check and re-torque all mounting hardware, especially the beam U-bolts, after 100 and 3,000 miles.**

IX. Checking for Leaks

1. Inflate the air spring to 25 p.s.i.

2. Spray all connections and the inflation valves with a solution of 1/5 liquid dish soap and 4/5 water to check for leaks. You should be able to spot leaks easily by looking for bubbles in the soapy water.

3. After the test, deflate the springs to the minimum pressure required to restore the Normal Ride Height, but not less than 10 p.s.i.

4. *IMPORTANT:* Check the air pressure again after 24 hours. A 2 to 4 p.s.i. loss after initial installation is normal. Retest for leaks if the loss is more than 5 lbs.

X. Fixing Leaks

1. If there is a problem with the swivel fitting, then:

   a. Check the air line connection by deflating the spring and removing the line by pulling the collar against the fitting and pulling firmly on the air line. Trim 1" off the end of the air line. Be sure the cut is clean and square. Reinsert the air line into the push-to-connect fitting.

   b. Check the threaded connection by tightening the swivel fitting another 1/2 turn. If it still leaks, deflate the air spring, remove the fitting, and re-coat the threads with thread sealant. Reinstall by hand tightening as much as possible, then use a wrench for an additional two turns.

2. If there is a problem with the inflation valve, then:

   a. Check the valve core by tightening it with a valve core tool.

   b. Check the air line connection by removing the air line from the barbed type fitting. *CAUTION: Do not cut it off. As this will usually nick the barb and render the fitting useless.* Cut air line off a few inches in front of the fitting and use a pair of pliers or vise-grips to pull/twist the air line off the fitting.

3. If the preceding steps have not resolved the problem, call Air Lift Technical Service at 1-800-248-0892 for assistance.

XI. Troubleshooting Guide

Problems maintaining air pressure, without on-board compressor.

1. Leak test the air line connections and threaded connection of the elbow into the air spring. See Section X to repair.

2. Leak test the inflation valve for leaks at the air line connection or dirt or debris in the valve core. See Section X to repair.

3. Inspect air lines to be sure it is not pinched. Tie straps may be too tight. Loosen or replace strap. Replace leaking components.

4. Inspect air line for holes and cracks. Replace as needed.

5. A kink or fold in the air line. Reroute as needed.

You have now tested for all of the most probable leak conditions that can be easily fixed. At this point the problem is most likely a failed air spring - either a factory defect or an operating problem. Please call Air Lift at 1-800-248-0892 for assistance or a replacement air spring.

XII. Maintenance and Operations

Minimum Air Pressure	Maximum Air Pressure
10 p.s.i.	100 p.s.i.
Failure to maintain correct minimum pressure (or pressure proportional to load), bottoming out, over-extension, or rubbing against another component will void the warranty.	

By following these steps, vehicle owners will obtain the longest life and best results from their air springs.

1. Check the air pressure weekly.

2. Always maintain Normal Ride Height. Never inflate beyond 100 p.s.i.

3. If you develop an air leak in the system, use a soapy water solution to check all air line connections and the inflation valve core before deflating and removing the air spring (see page 6).

4. When increasing load, always adjust the air pressure to maintain the Normal Ride Height. Increase or decrease pressure from the system as necessary to attain Normal Ride Height for optimal ride and handling. Remember that loads carried behind the axle (including tongue loads) require more leveling force (pressure) than those carried directly over the axle.

5. *IMPORTANT*: For your safety and to prevent possible damage to your vehicle, *do not exceed maximum Gross Vehicle Weight Rating (GVWR), as indicated by the vehicle manufacturer.* Although your air springs are rated at a maximum inflation pressure of 100 p.s.i. The air pressure actually needed is dependant on your load and GVWR, which may be less than 100 p.s.i. Check your vehicle owners manual and do not exceed the maximum load listed for your vehicle.

6. Always add air to springs in small quantities, checking the pressure frequently. Air springs require less air volume than a tire and inflate quickly.

7. *Should it become necessary to raise the vehicle by the frame, make sure the system is at minimum pressure (10 p.s.i.) to reduce the tension on the suspension/brake components. Use of on-board leveling systems do not require deflation or disconnection.*

8. ***IMPORTANT:*** **Check and re-torque all mounting hardware, especially the beam U-bolts, after 100 and 3,000 miles.**

Thank you for purchasing Air Lift Products

Mailing Address:
AIR LIFT COMPANY
P.O. Box 80167
Lansing, MI 48908-0167

Street Address:
AIR LIFT COMPANY
2727 Snow Rd.
Lansing, MI 48917

Local Phone: (517) 322-2144
Fax: (517) 322-0240

For Technical Assistance call 1-800-248-0892

"The Choice of the Professional Installer"

Printed in the USA